

REMARKS

Claims 1-12 and 17-20 are pending in this application.

Claims 1 and 17 have been amended in order to more particularly point out, and distinctly claim the subject matter to which the applicants regard as their invention, and to recite that the magnet is a sintered magnet or a bonded magnet. Claim 17 has also been amended to recite that the magnet is produced under conditions sufficient to form a film layer on the metal surface of the magnet.

Support for the claims as amended appears throughout the specification and claims as originally filed.

No new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **February 25, 2004**.

In view of the amendments to the claims and the remarks set forth below, further and favorable consideration is respectfully requested.

I. Claim Rejections under 35 USC §112

- A. Claims 17-20 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.***

Responsive to this rejection, claim 17 has been amended to clarify that the magnet is produced by vibrating and/or agitating in a treating vessel under conditions sufficient to form the film layer on the metal surface of the magnet.

In view of claim 17 as amended, it is submitted that the claims are clear and definite within the meaning of 35 USC § 112. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

II. Claim Rejections under 35 USC §102

A. Claims 1-3, 5-8 and 17-20 are rejected under 35 USC §102(b) as being anticipated by Nakagawa et al. (JP 64-55806).

The Examiner states that Nakagawa discloses a rare earth metal based permanent magnet having a film layer made of a fine metal powder directly on a metal forming the surface of the magnet, that Nakagawa discloses a copper or aluminum film layer, and that Nakagawa discloses a bonded resin R-Fe-B rare earth metal-based permanent magnet.

Anticipation under 35 USC § 102(b), requires that a single prior art reference disclose each and every element of the claimed invention.

Claims 1 and 17 have been amended to require that the magnet is a sintered magnet or a bonded magnet.

The invention described in Nakagawa relates to a magnet powder having a metal coating layer formed on a surface thereof. This reference does not disclose forming a metal coating layer on the surface of the magnet, i.e., a magnet body formed from a magnet powder. The English abstract of the reference only describes forming a metal coating layer on the surface of alloy ***powder*** having a composition of R-T-B or R-T-B-M, i.e., a magnet powder.

As is clear from the present specification, the present invention is directed to a magnet *body*, not a powder. Accordingly, claims 1 and 17 have been amended as discussed to clarify that the permanent magnet is a magnet body, i.e., is a sintered or bonded magnet.

Nakagawa does not disclose forming a metal layer on the surface of a magnet body or a magnet body having a metal layer formed directly on a surface thereof, as required by the present claims.

In view of the claims as amended and the remarks set forth above, it is submitted that nothing in Nakagawa anticipates the claimed invention within the meaning of 35 USC §102. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

III. Claim Rejections under 35 USC §103

A. Claims 4 and 9 are rejected under 35 USC §103(a) as being unpatentable over Nakagawa et al. in view of Takaguchi et al. (JP 09007810).

The Examiner contends that it would have been obvious to the skilled artisan to use a low hardness plating layer for the metal layer of Nakagawa as suggested by Takaguchi, in order to stop up pin holes. The Examiner further states that the presently claimed hardness would have been obvious, because it has been held that discovering an optimum value of a results effective variable involves only routine skill in the art.

Claims 4 and 9 are directly and indirectly dependent on claim 1, respectively. Claim 1 has been amended to clarify that the permanent magnet is a sintered or bonded magnet.

Takaguchi discloses a permanent magnet and requires a low hardness metal plating layer and a high hardness metal plating layer, formed on the surface of an R-Fe-B base permanent magnet, where the low hardness metal plating layer is a non-gloss plating layer and the high hardness metal plating layer is gloss nickel plating layer, and where the film thickness ratio between the low hardness metal plating layer and the high hardness metal plating layer is 6:4-8:2. Takaguchi further discloses that after plating with the low hardness metal plating layer, mechanical impulse is given to the magnet to stop up pin-holes prior to plating with the high hardness plating layer.

The Examiner appears to be contending that it would have been obvious to use only the low hardness plating layer of Takaguchi, in absence of the high hardness layer, in order to stop up pinholes.

It is submitted that Takaguchi *requires* both a low and a high hardness plating layer in order to achieve improved corrosion resistance. Takaguchi does not suggest a magnet including only a single, low hardness layer. Accordingly, the skilled artisan in view of Nakagawa and Takaguchi, would not be motivated to select only the low hardness layer, because Takaguchi requires *both* layers.

Further, assuming *arguendo* motivation to select only the single, low hardness layer, the present invention would not be obtained because Nakagawa does not teach or suggest a sintered or bonded magnet body having a metal layer formed directly on a surface thereof, as presently required. Takaguchi does not cure the deficiencies of Nakagawa.

In view of the amendments to the claims and the above remarks, it is submitted that nothing in Nakagawa or Takaguchi, taken alone or together, renders the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

B. Claims 10-12 are rejected under 35 USC §103(a) as being unpatentable over Nakagawa et al. in view of Yoshimura et al. (JP 09-289108).

The Examiner states that it would have been obvious to the skilled artisan, to use a thin layer thickness for the metal layer of Nakagawa as suggested by Yoshimura in order to improve adhesion and maintain the desired magnetic properties. The Examiner further states that the presently claimed hardness would have been obvious, because it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

Claims 10-12 are directly and indirectly dependent on claim 1. Claim 1 has been amended to clarify that the permanent magnet is a sintered or bonded magnet.

Yoshimura is directed to a R-Fe-B permanent magnet having an electric insulating film excellent in adhesion to raise electric insulating properties, corrosion resistance, and heat resistance. Yoshimura discloses a base metallic film provided on the surface of the magnet, followed by a chromate treatment/film provided on the base metallic film, followed by a silane coupling agent and lastly a polyimide film provided on the outermost surface of the permanent magnet. The base metallic film has a thickness of 1.0 μm to 10 μm .

Yoshimura *requires* the recited stacked structure including the base metallic film, chromate treatment, silane coupling agent and polyimide film. Yoshimura does not teach or suggest a metallic thin layer having a thickness that falls within the claimed range of 0.001 to 0.2 μm . Rather, Yoshimura requires a base metallic layer having a thickness of 1.0 μm to 10 μm .

Nakagawa does not teach or suggest a sintered or bonded magnet body having a metal layer formed directly on a surface thereof, as presently required. Yoshimura does not cure the deficiencies of Nakagawa.

Accordingly, Yoshimura does not teach or suggest a thin metallic layer as required by the present claims.

In view of the amendments to the claims and the above remarks, it is submitted that nothing in Nakagawa or Yoshimura, taken alone or together, renders the claimed invention obvious within the meaning of 35 USC § 103. Accordingly, the Examiner is respectfully requested to withdraw this rejection.

U.S. Patent Application Serial No. 10/068,970

Response dated July 26, 2004

Reply to OA of February 25, 2004

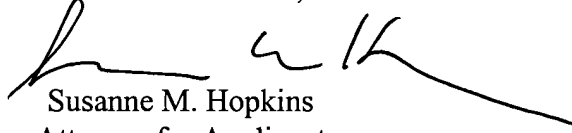
In view of the aforementioned amendments and accompanying remarks, the claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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